Serial No. 10/085,527
Atty. Doc. No. 99P03591US

Amendments to the claims

Please amend the claims as shown. Applicant reserves the right to pursue any canceled claims at a later date.

1. (original) A method for the surface treatment of a component (1) having a curved component surface (3), comprising:

removing material from the component surface (3) along a contour line on the component surface (3) with a particle jet (7) that is generated from a particle source (5), the particle jet having a blasting distance (d), a blasting intensity, a blasting angle (α) and a blasting time, the particle jet characterized in that at least one of the distance, intensity, angle and time is matched to the contour line in such a way that a homogeneous surface roughness is established along the contour line.

2. (original) The method as claimed in claim 1, wherein the matching of the jet parameters takes place automatically.

3. (original) The method as claimed in claim 1, wherein the particle source (5) and the component (1) are moved relative to one another.

4. (original) The method as claimed in claim 1, wherein the particle source (5) is moved relative to the component (1) in such a way that the blasting distance (d) is constant..

5. (original) The method as claimed in claim 1, wherein the particle source (5) is moved relative to the component (1) in such a way that the blasting angle (α) is constant.

6. (original) The method as claimed in claim 1, wherein the component (1) has a base body (11) with a base material (13), the base body (11) having the component surface (3) which, for a first coating (15) to be applied to the base body (11), is treated with a first coating material (17).

7. (original) The method as claimed in claim 6, wherein the first coating material (17) used is an MCrAlX alloy, where M represents one or more elements comprising iron, cobalt and nickel, Cr represents chromium, Al represents aluminum and X represents one or more elements selected from the group consisting of yttrium, rhenium and the rare earths.

8. (original) The method as claimed in claim 6, wherein the first coating (15) also has the component surface (3) which, for a second coating (19) to be applied to the component (1), is treated with a second coating material (21).

9. (original) The method as claimed in claim 1, wherein the component (1) has a base body (11) with a base material (13), a first coating (15) comprising a first coating material (17) being applied to the base body (11), and the coated component (1), for a second coating (19) to be applied to the component (1), being treated with a second coating material (21).

10. (original) The method as claimed in claim 8, wherein, in the coating process, a ceramic is used as the second coating material (21).

11. (original) The method as claimed in claim 1, wherein the component (1) is designed for a hot gas to flow around it.

12. (original) The method as claimed in claim 1, wherein the component (1) used is a turbine rotor blade (23), a turbine guide vane or a heat shield element (25) of a combustion chamber.

13. (original) The method as claimed in claim 1, wherein the blasting angle (α) on the component surface (3) is approximately 20° to 90°.

14. (original) The method as claimed in claim 13, wherein the blasting angle (α) on the component surface (3) is approximately 50° to 90°.

15. (cancelled)

16. (cancelled)

17. (cancelled)

18. (original) A method for surface treating a component (1) of a gas turbine having a curved surface (3), comprising:

removing material from the component surface (3) along a contour line on the component surface (3) using a particle jet (7) from a particle source (5) having blasting angle (α) of approximately 20° to 90°, a blasting distance (d), a blasting intensity, and a blasting time,

wherein at least one of the distance, intensity, angle and time of the particle jet (7) is matched to the contour line to establish a homogeneous surface roughness along the contour line.

19. (original) The method as claimed in claim 18, wherein the particle source (5) is moved relative to the component (1) in such a way that the blasting distance (d) is constant.

20. (original) The method as claimed in claim 18, wherein the particle source (5) is moved relative to the component (1) in such a way that the blasting angle (α) is constant.